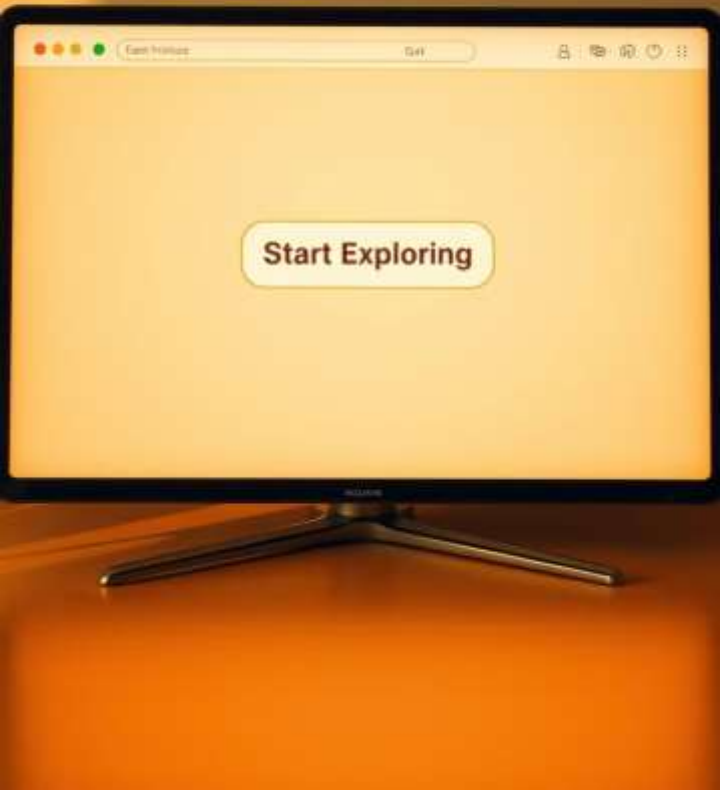


React.js with Next.js

A deep dive into building modern, dynamic web applications with React.js and Next.js.

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React.js and Next.js:

An Introduction

Explore React.js, a JavaScript library for building user interfaces. Discover Next.js, a React framework for server-side rendering and static websites. Learn about their features, differences, and directory structure.





React.js: Key Features

1 Component-Based

Reusable UI components with their own state and logic.

2 Virtual DOM

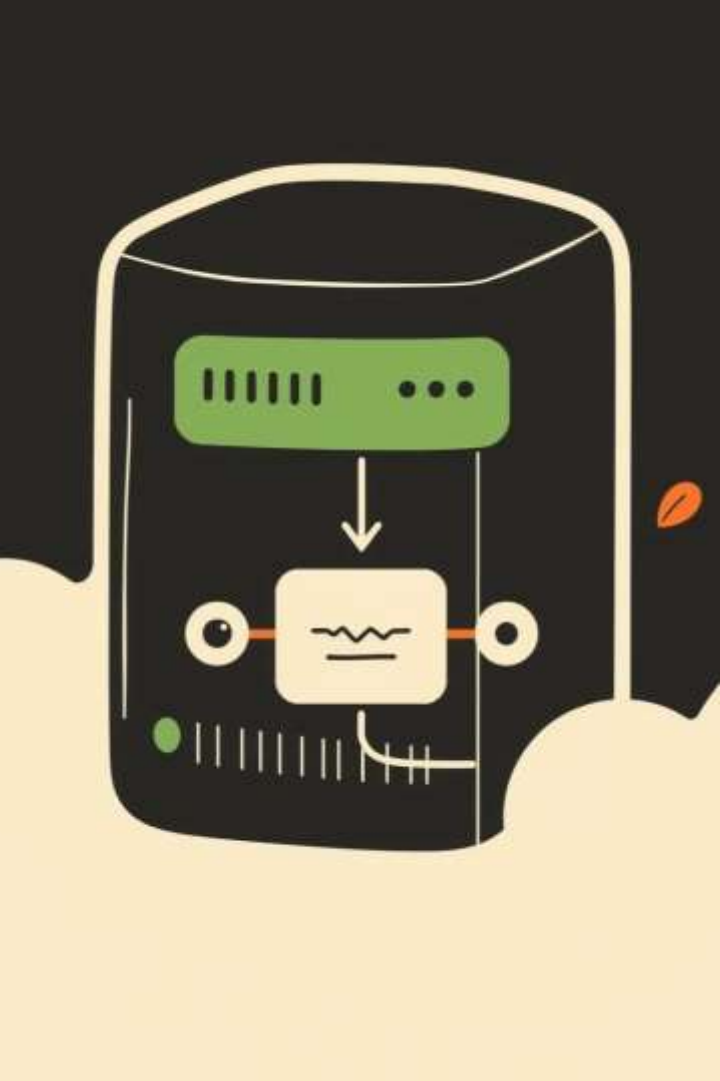
Updates only parts of the UI for faster performance.

3 Declarative Syntax

Describes how the UI should look based on the state.

4 JSX

HTML-like code within JavaScript for UI components.



Next.js: Core

Server-Side Rendering

Renders pages on the server for better performance and SEO.

Static Site Generation

Pre-renders pages as static HTML at build time.

File-Based Routing

Maps file structure to URL routes automatically.

API Routes

Creates API endpoints within the project.

React vs. Next.js: Nature & Rendering

React.js

Library focused on the view layer.

Client-side rendering (CSR) by default.

Next.js

Framework built on React.

SSR and SSG in addition to CSR.

React vs. Next.js: Routing & SEO

React.js

Routing requires libraries like React Router.

CSR may be less SEO-friendly.

Next.js

File-based routing by default.

Improves SEO with SSR and SSG.



Next.js Project: Directory Structure

A typical Next.js project includes folders like `public/`, `src/`, `components/`, `pages/`, `styles/`, `utils/`, and `hooks/`. Key files include `next.config.js` and `package.json`.



Next.js Project: Pages Directory

1

`index.js`

Corresponds to the homepage (/ route).

2

`about.js`

Maps to the /about route.

3

`_app.js`

Entry point for all pages.



Quickstart: React & Next.js

React: `npx create-react-app hello`

Next.js: `npx create-next-app@latest hello-next-app`

Run Next.js: `npm run dev`

Access: `http://localhost:3000`